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Navy Entomology Center of Excellence and CDC join forces on global health protection

Lt. Jen Wright, NECE Public Affairs

The Navy Entomology Center of Excellence (NECE) and Centers for Disease Control (CDC) have teamed up to complete several projects aimed at increasing our understanding of important integrated pest management (IPM) techniques used in both global humanitarian efforts and in deployed settings.

In 2004 the deployed war fighter program (DWFP) was initiated with the aim to develop and validate methods to protect military personnel from threats posed by disease-carrying insects. The program allowed for the creation of two key positions at the CDC for Navy entomologists currently held by Cmdr. David Hoel and Lt. James Dunford.

NECE also plays an essential role training new personnel at the CDC and the United States Agency for International Development (USAID) on indoor residual spraying (IRS) and general pesticide application, in conjunction with a DOD pesticide certification courses. "NECE personnel, both active duty and civilian, have a unique, world-wide, hands-on experience with insecticide-based control of vectors that transmit human diseases," said Robert Wirtz, CDC Chief of Entomology for the Division of Parasitic Diseases and Malaria.

"Working with a variety of collaborators in an international setting, including the CDC, enables us to seek new relationships leveraging expertise and resources resulting in products and techniques that better protect our deployed members from human diseases transmitted by blood feeding insects," said Cmdr. Hoffman, NECE Officer in Charge.

Currently NECE and the CDC are collaborating at the Camp Blanding Joint Training Facility, Florida to evaluate pesticide efficacy used as part of an international malaria prevention and control program.

"IRS is a cornerstone of malaria control programs worldwide," said Wirtz. To better understand how insecticides are performing in field conditions the team is evaluating the insecticide efficacy applied to common housing materials such as mud, wood, and concrete.

Throughout this study the CDC is able to draw on NECE's vast experience of evaluating new products designed to protect the "war-fighter" from insects that transmit diseases and apply it to find practical solutions for one the largest global public health problems.

"Under the President's Malaria Initiative, CDC has protected more than 27 million people with IRS in the last five years. In the last decade both IRS and long-lasting insecticide treated bed nets (LLINs) prevented an estimated 700,000 deaths of children. LLINs require consistent use and repair to maintain physical integrity; however, with IRS everyone in the treated house is protected and it does not require a change in behavior to get this benefit," said Wirtz.

The problem of insecticide resistance is well documented and will continue to pose a threat to malaria control programs. IRS allows for the rotation of different classes of World Health Organization (WHO) -approved insecticides as a means to manage resistance and mitigate its impact. Although LLINs are an integral part of IPM programs, they are treated with only a single class of pyrethroid insecticides, this singularity lends itself to resistance issues.

The CDC and NECE have future collaboration plans that include field testing of LLINs to determine the impact of holes and tears on nets. Understanding how wear and tear affect bed net effectiveness will aid in guiding national LLIN replacement policy and developing more durable LLINs.

NECE is well-equipped to independently evaluate existing and new formulations as well as new insecticides using state of the art equipment, thus providing a tremendous resource to those looking to test new products for field use. "We have been able to work closely with public health experts from partner nations, enabling relationships to develop that lead to cooperation addressing unique prevention and control issues, positively impacting the health of those facing debilitating disease," said Hoffman.

"NECE's ability to conduct independent assessments of insecticide

Camp Blanding Joint Training Facility, Fla- Lt. Ryan Larson of the Navy Entomology Center of Excellence sprays insecticide for an experiment performed with the Center for Disease Control.

formulations and pesticide application equipment is also unique," said Wirtz. "The equipment evaluations range from how "user friendly" a specific sprayer might be to using state-of-the-art computer assisted instruments to assess insecticide spray patterns and droplet size." These collaborative evaluations insure the accuracy and efficiency of field equipment used in humanitarian and military deployment settings.

"We have plans to assist with efforts to establish NECE as a WHO Collaboration Center for evaluating insecticides, insecticide application equipment, and insecticide formulations, making NECE and its unique resources and capabilities available to the world community," said Wirtz.

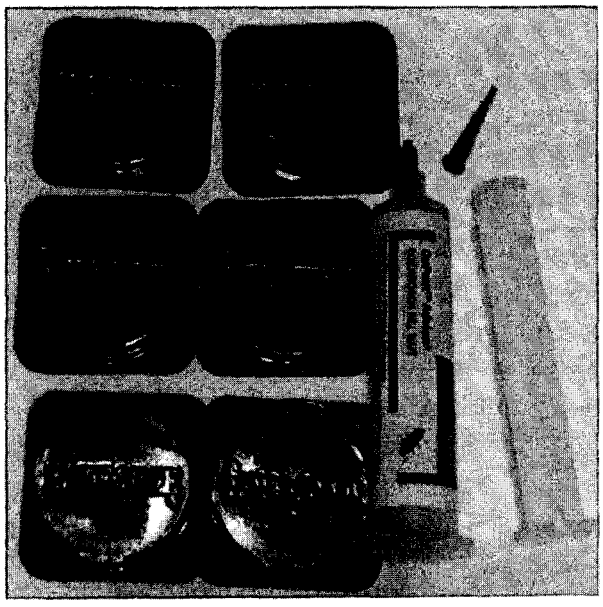
Atlanta, GA- Lt. James Dunford of the US Navy performs an experiment at the Centers for Disease Control as part of an ongoing collaboration with the Navy Entomology Center of Excellence.

Syngenta to acquire DuPont Professional Products business

Syngenta has announced that it has agreed to acquire the DuPont Professional Products insecticide business, a leading supplier of innovative products for the public heal pest control, professional turf and ornamentals markets.

The acquisition will expand the range of products which Syngenta offers to golf course and lawn care professionals and to ornamental growers, and will also strengthen its portfolio for the control of public health pests.

Under the terms of the agreement, Syngenta will acquire a global business including established pest control brands Advion® and Acelepryn® and other intellectual property, as well as a number of employees, for a consideration of $125 million. Syngenta will also access the related active ingredients and formulated products from DuPont through exclusive supply and licensing agreements.



Advion® cockroach gel bait

Robert Berendes, Head of Business Development, said: "This acquisition will contribute to our objective of increasing profitability in the Lawn and Garden business through a focus on integrated solutions for our customers based on high value chemistry and genetics. The products we are acquiring have an excellent environmental profile while providing superior control of insects in a wide variety of applications."

The transaction is expected to close in the fourth quarter of 2012.

Syngenta is one of the world's leading companies with more than 26,000 employees in over 90 countries dedicated to their purpose: Bringing plant potential to life. Through world-class science, global reach and commitment to customers their stated intent is to increase crop productivity, protect the environment and improve health and quality of life. For more information about the acquisition and the company, please go to www.syngenta.com.